

10/772,863

PATENTREMARKS

Reconsideration of the application in view of the above amendments and the following remarks is requested. Claims 30-42 are in this application. Claims 1-29 have been cancelled. Claim 30 has been amended. Claims 39-42 have been added.

On December 22, 2005, the Examiner indicated that the claims were not patentable over Skotnicki et al. (U.S. Patent Publication No. 2002/0163027 A1). The Examiner proposed canceling claim 32, and amending claim 30 by adding the element --forming horizontally spaced-apart source and drain regions of a second conductivity type in the semiconductor layer--. It appears, however, that claim 36 would also have to be cancelled, and that claims 34 and 38 would also have to be amended.

As a result, applicant has amended claim 30 to recite, in part,

"removing a portion of the layer of conductive material to form a conductive gate that lies over the semiconductor layer."

In FIG. 18, Skotnicki teaches forming a gate material over the pillar PLP5, which also fills up cavity CV. Cavity CV was previously formed by removing silicon-germanium-carbon layer 8. (See paragraphs 47, 49, and 55 of Skotnicki.) After this, a mask MSQ1 is formed on the gate material. The gate material is then anisotropically etched to form the structure shown in FIG. 19, which includes an internal gate 14 and external gate part 15. (See paragraphs 60 and 61 of Skotnicki.)

However, it is not possible for internal gate 14 or external gate part 15 shown in FIG. 19 of Skotnicki to lie over the semiconductor layer, which must include silicon, germanium, and carbon as required by claim 30, because silicon-germanium-carbon layer 8 was previously removed to form cavity CV. After silicon-germanium-carbon layer 8 has been removed, silicon layer 6 lies below cavity CV and silicon layer 9/90 lies above cavity CV. (See paragraphs 44 and 48 of Skotnicki.)

Thus, since it is not possible for internal gate 14 or external gate part 15 shown in FIG. 19 of Skotnicki to lie over a semiconductor layer that includes silicon,

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germanium, and carbon, claim 30 and dependent claims 31-42 are patentable over Skotnicki.

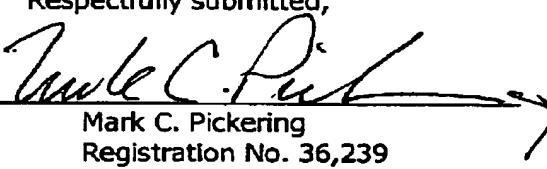
In addition, applicant added claims 39-42 and further amended claim 30. Claim 39 was added to expressly recite that the first material contacts the top surface of the semiconductor material, and claim 30 was further amended to remove any requirement that the first material must contact the top surface of the semiconductor material.

Claim 39 is further patentable over Skotnicki because Skotnicki fails to teach or suggest removing the remaining portion of the first material. If oxide layer 3 is read to be the first material, then Skotnicki fails to teach or suggest removing the remaining portion of oxide layer 3 when nitride layer 4 is removed, instead teaching that oxide layer 3 remains. (See FIGS. 10 and 11 of Skotnicki.)

Thus, for the foregoing reasons, it is submitted that all of the claims are in a condition for allowance. Therefore, the Examiner's early re-examination and reconsideration are requested.

Respectfully submitted,

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